(or properly disillusioned) if he follows the argument. This emphasis is completely different from that in normal genetics books which have an inevitable bias towards abnormality to define normality, and it is one to be thoroughly welcomed—even though it does reveal our ignorance about these things. The book is well illustrated in both colour and black and white.

Your Heredity and Environment is a delightful repository of recondite facts. For example, Daniel Lambert is no longer the heaviest man who ever lived: there was an American who weighed over 76 stones, and an American lady (claimed as the "fattest human being on record") who weighed 55 stones although only 5 feet 5½ inches tall (her mother weighed 51½ stones). It is suggested that Abraham Lincoln had Marfan's syndrome, and Toulouse-Lautrec had either achondroplasia or osteogenesis imperfecta. Pliny is noted as recording a transmission of polydactyly; the family of Leonardo da Vinci is described; the possibility is mentioned that El Greco and Holbein had astigmatism, Constable colour-blindness, Cezanne myopia, and that Monet had cataracts. Faced with such a collection of historical speculation, it is unexpected (not to say disappointing!) that Noah's albinism is not included (although there is much of the Bible's genetics in the book—including the suggestion that Goliath was a pituitary giant and hence rather a feeble creature), nor is Penrose and Stern's saga of "Porcupine Man" (there is little information about the Y-chromosome), Spurway's investigations into virgin birth, or the recent story of George III and porphyria (although this was probably told too late for inclusion).

There are a mass of minor inaccuracies: the incidence of porphyria among South African whites is 0·03 per cent and not 0·1 per cent; the genetical effects of radiation are not necessarily cumulative (no mention is made of dose-rate or chromosomal repair effects); anencephaly is not a recessively-inherited condition in the normal sense; sickle cell disease is far from being confined to African negroes—the frequency of the gene rises to 12 per cent in South Arabia and 15 per cent in parts of India; the adrenals and suprarenals are the same thing; and Hindus are not a racial group. Particularly confusing is the appendix "Basic periodicals dealing with human heredity": both the *Annals of Human Genetics* and the *Journal of Medical Genetics* are listed as American journals (and the latter is described as a "medical or other journal" rather than as a genetical one); the *British Medical Journal* and the *British Medical Bulletin* are confused; and although *Nature*, *Science* and *Metabolism* are listed, no mention is made of the general genetical journals, some of which frequently carry articles on human genetics. More reasonable errors in a book of this nature (albeit still errors) are outdated statements of ignorance such as about the heredity of goitre or congenital dislocation of the hip.

Perhaps the point about this book is that it is only incidentally concerned with human genetics. It should really be counted as a work of human biology: Scheinfeld ranges from the origin of cancer to graphology and palmistry; from racial differences in the sex ratio at birth to the Kinsey Reports; from circus freaks to the longevity of Methuselah. He is to be commended for his aims, criticized for his imprecision, and censured for his prolixity. The cost of four guineas may prevent the casual inquirer from buying this book, but it will be surprising if this book is not widely available and consulted in Public Libraries for years to come.

R. J. BERRY

HUMAN ORIGINS

Day, Michael H. *Guide to Fossil Man. A Handbook of Human Palaeontology.* London, 1965. Cassell. Pp. 289. Price 42s.

Teilhard de Chardin, Pierre. *The Appearance of Man.* Translated by **J. M. Cohen.** London, 1965. Collins. Pp. 286. Price 25s.

THESE TWO BOOKS are basically looking at the same scientific problem—human origins—but are very different in textual composition. In the first, the author is a young anatomist and the work is a short handbook on fossil man. In the second the author, who died in 1955, was a Jesuit-philosopher-palaeontologist, and the collected essays which make up the volume attempt to review human origins in more philosophical terms. The first is a good general reference work,

especially for students of human biology, prehistoric archaeology, anatomy and zoology. The second work is for the general reader and for the student and professional wishing to inquire further into the individualistic views of Teilhard de Chardin.

In the handbook by Day, there are three parts, the last being the largest. The first part (fourteen pages) briefly reviews the nature of the Pleistocene Period, its divisions and geology; the material cultures of the Palaeolithic; and the problems of dating. The second part (ten pages) is concerned with skeletal variability in so far as it is relevant to studies of human fossils: normal skeletal variation, sexual dimorphism, age changes, dental terminology and anatomy. The final part (240 pages) is a select guide to hominid fossils. This is not written as an exhaustive survey but rather as a review of the more principal fossil hominid fragments. What is unusual, and particularly valuable for reference purposes, is that the information for each specimen or group of remains is presented in the same systematic way throughout. Thus the facts are presented in the following sequence: name of finds; country of origin; region; synonym and other names; site; discoverer; geology; associated finds; dating; morphology; dimensions (selected); affinities (with other fossils and groups); location of original specimens (address of institution); availability of casts and institution distributing them; selected references.

The book also benefits from numerous excellent maps showing the location of the fossil finds, and many photographs of the specimens. A substantial glossary will also help the general reader.

Of a very different style is Teilhard de Chardin's work, comprising a series of essays concerned with his views on the origins of man. As much a philosopher as palaeontologist, he goes beyond a purely scientific account of human evolution, and expertly brings the palaeontological evidence into line with his belief in the guided evolution of life and the psychic parameters of man.

All essays are at least ten years old, and the first seven essays (each a chapter) are pre-World War II. It was wise of the publishers to invite Desmond Collins to write a preface for this English edition, with a review of some of the more important developments in the last ten years. A longer survey of the present position would, I feel, have been even better, and for example, there was clearly no space to refer to such controversial genera as *Oreopithecus* or *Ramapithecus*, or the recent views of Tobias or Napier or Brace.

His bio-philosophical style is, to me, not an easy one and at times I found myself searching for a more "digestible" mode of expressing a term or sentence (e.g. "strongly pachyosteoid" referring to the more robust australopithecines). But few errors in printing occur in this book (Fig. 6 is inverted; Drenna of the text and index is presumably referring to the anatomist Drennan).

Both works are to be recommended, but to a somewhat different group of readers, as already indicated.

DON BROTHWELL

ECOLOGY

Sprout, Harold and **Sprout, Margaret.** *The Ecological Perspective on Human Affairs with Special Reference to International Politics.* Princeton, NJ, 1965. Princeton University Press. (London, 1966. Oxford University Press.) Pp. xi+236. Price 44s. in UK only.

METAPHOR, AND RHETORICAL or poetic writing, if not overdone, are enlivening and serve to jolt the reader into attention. They act as gnomic summaries of what has been, or is being, said. The authors of this book dislike the style; but they do not always avoid it themselves. They exhibit for our disapproval scores of purple passages from the recent literature of history and geography, and argue that the perpetrators took their metaphors seriously and so were misled both in their "facts" and in their method of thinking about those "facts". Without reading all the works quoted it is impossible to assess the consequences of metaphor, reification, and the "pathetic fallacy", but I find it hard to believe that all these writers actually thought that "France felt", "mountains pushed", "the sea beckoned", and so on. More usefully, the authors discuss non-metaphorical language.